California GARDEN

MAY-JUNE 1999 Volume 90 No. 3 $1.50

HORTICULTURAL CALENDAR

MAY 1

★SAN DIEGO FLORAL ASSOCIATION is testing a new policy concerning our **Library**. It will be open to everyone the first Saturday of every month, hours 10:00AM-3:00PM. We have thousands of gardening-related books you can peruse in the library. **Members** of SDFA can check them out. Located in Balboa Park, Casa del Prado, Room 105. 619/232-5762.

MAY 1-2

VISTA GARDEN CLUB 65th Standard Flower Show & Sale. "In The Garden". Brengle Terrace Senior Center, 1400 Vale Terrace, Vista. Sat. 1:30-5PM; Sun. 10AM-4PM. Free.

SAN DIEGO IMPERIAL COUNTIES IRIS SOCIETY Show & Plant Sale. "1900-1999 Retrospectively". Casa del Prado, Balboa Park. Sat. 1-5PM; Sun. 11AM-4PM. Free.

CARLSBAD AFRICAN VIOLET SOCIETY Annual Show & Sale. "Violets in the Orient". Plaza Camino Real Mall, 255 El Camino Real. Sat. 1-6PM; Sun. 11AM-5PM. 760/434-8116. Free.

MAY 3

PALOMAR DISTRICT DESIGN FORUM Phil Rulloda, Anaheim. Rancho Bernardo Community Presbyterian Church, 17010 Pomerado Rd. Mon. 12:30-3:30PM. 760/749-1920. $8.

MAY 4 THRU JUNE 8

BETTY NEWTON "Cutting Your Water Bill" Grossmont High, 1100 Murray Dr. La Mesa. Tues. 6:20-9:30PM. 644-8218. $15.

MAY 8

★SAN DIEGO FLORAL ASSOCIATION Tour. Huntington Library Art & Botanical Gardens. Call 232-5762. $33 & $36. (Lunch Not Incl.)

CALIFORNIA NATIVESCAPES BOTANICAL GARDEN Tour. S. D. Wild Animal Park. 10AM. 619/487-2629. Free with Admission.

LA JOLLA GARDEN CLUB Annual Spring Plant Market. Home Savings of America Bank, 7777 Girard Ave. Sat. 9AM-2PM.

MAY 8-9

DESCANSO GARDENS Geranium Show & Sale. 1418 Descanso Dr., La Canada Flintridge. Sat. Noon-4PM; Sun. 9AM-4PM. 818/952-4401.

MAY 9

SAN DIEGO EPIPHYLLUM SOCIETY 28th Mother's Day Show & Sale. Casa del Prado, Balboa Park. Sun. 11AM-4PM. Free.

MAY 15-16

SAN DIEGO GERANIUM SOCIETY 28th Annual Show & Sale. Casa del Prado, Balboa Park. Sat. & Sun. 10AM-5PM. Free

DESCANSO GARDENS African Violet Show. 1418 Descanso Dr., La Canada Flintridge. Sat. & Sun. 9AM-4:30PM. 818/952-4401. Fee.

CITY OF L.A. 15th Annual Country Garden & Craft Fair. 16633 Magnolia Blvd., Encino. Sat.& Sun. 9AM-5PM. 818/784-5180. Pkg. $2.

MAY 16

THE HUNTINGTON 25th Annual Plant Sale. 1151 Oxford St., San Marino. 10AM-4PM. Free.

MAY 22

★SAN DIEGO FLORAL ASSOCIATION Arrangers Guild Flower Show. "As We Like It" Casa del Prado, Balboa Pk. Sat. 10AM-4PM. Free.

MAY 29

TEMECULA VALLEY ROSE SOCIETY Rose Show. Temecula Comm. Rec. Ctr., 30875 Rancho Vista Rd. Sat. 12:30-5PM. Free

MAY 29-30

BROMELIAD STUDY GROUP OF BALBOA PARK Annual Show & Sale. Sat. 11:00AM-4:00PM, Sun. 10AM-4PM. Free.

JUNE 5

★SAN DIEGO FLORAL ASSOCIATION LIBRARY will be open today. See May 1st for details.

JUNE 5-6

SAN DIEGO CACTUS & SUCCULENT SOCIETY Plant Show. Casa del Prado, Balboa Pk. Plant Sale Sat.& Sun. 10AM-5PM. Show Opens Sat. Noon-5PM; Sun. 10AM-5PM. Free.

JUNE 11-13

DESCANSO GARDENS Bonsai Show & Demonstration. 1418 Descanso Dr., La Canada Flintridge. Fri.-Sun. 9AM-4:30PM. 818/952-4401.

JUNE 13

SOUTHWEST HEMEROCALLIS SOCIETY Show & Plant Sale. Casa del Prado, Balboa Park. Sun. Noon-4PM. Free.

JUNE 15

★SAN DIEGO FLORAL ASSOCIATION Quarterly Dinner/Program. Casa del Prado, Balboa Park, Tues. Social 5:45PM. 232-5762. $6

JUNE 16 THRU JULY 5

1999 DEL MAR FAIR Flower & Garden Show

(continued on page 68)

Published by
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for 89 Years

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Manuscripts are invited. Deadlines are the 20th of January, March, May, July, September, and November. *California Garden* reserves the right to edit any and all submitted material. All manuscripts and illustrations will be handled carefully, but we cannot assume responsibility for their safety. Submissions must be double spaced and/or on a computer disk from IBM or compatible, in WordPerfect 5.1. All opinions expressed are those of the authors and do not necessarily reflect the views of the editors of *California Garden*. No endorsement of named products is intended, nor is criticism implied of similar products that are not mentioned.

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VOLUME 90 NUMBER 3

THE MAGAZINE FOR THE HANDS-ON GARDENER

MAY-JUNE 1999

FEATURES

70 Gardens of the Golden State . . . . . M. Truby
70 Educational Products for Homemakers, Gardeners ... J. Coleman
71 Foxy Ladies . . . . . C. Zinsky
72 Easy Flower Arranging . . . . . B. Jones
73 The Worthy, Widespread Jade Plant . . . . . R. Horwitz
74 Winning Flower Arrangements . . . . . B. Jones
75 Bromeliads: Their History and Habitat . . . . . B. Bailey
77 Raising Good Apples, Part II . . . . . S. Martin
78 Dandelion . . . . . V. Almond
87 Beautiful Bell Gardens . . . . . B. Jones
88 Chin Up! It's Time to Meet
the Black-Chinned Hummingbird . . . . . P. Pawlowski
91 Mission Gorge Park and Visitors Center
Showing Off Natives . . . . . B. Newton

DEPARTMENTS

66 Horticultural Calendar . . . . . J. Johns
68 San Diego Floral Association Bus Tours . . . . . A. Waters
69 Gleanings . . . . . B. Jones
80 Now Is the Time . . . . . M. Truby
84 Communications . . . . . J. Coleman
85 Book Reviews . . . . . R. Cox
93 Affiliates . . . . . L. Beyerle

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FLOWER SHOWS: Show chairman contact *California Garden*, 232-5762 if you want the magazine sold at your show.

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(HORTICULTURAL CALENDAR continued)

"Gardens of the Golden State". Via de la Valle West to Fairgrounds. 619/792-4273. Pk/Ent Fees.
UCCE MASTER GARDENERS Educational Exhibit on Citrus. East End of Pat O'Brien Hall, Del Mar Fair. 10AM-6PM. Free with Admission.
★SAN DIEGO FLORAL ASSOCIATION Educational Information Booth. East End of Pat O'Brien Hall, Del Mar Fair. 10AM-5PM. Free.

JUNE 19-20

SAN DIEGO FUCHSIA & SHADE PLANT SOCIETY Show & Sale. Casa del Prado, Balboa Park. Sat. 10AM-5PM; Sun. 10AM-4PM. Free.

JUNE 22

★SAN DIEGO FLORAL ASSOCIATION Tour. new J. Paul Getty Museum. Call 232-5762. $28 Member & $31. (Lunch Not Included)

BALBOA PARK: ONGOING PROGRAMS

SAN DIEGO JAPANESE FRIENDSHIP GARDEN Opening September 9, 1999. 232-2780.
OFFSHOOT TOURS 1 hour. Meet Botanical Lath House, Saturdays, 10AM. 235-1121. Free.

ONGOING EVENTS

QUAIL BOTANICAL GARDENS 230 Quail Garden Dr.,Encinitas. 9AM-5PM. 760/436-4032.
BLUE SKY ECOLOGICAL RESERVE Walks. Poway. Sat. & Sun. 9AM. Call 679-5469.
WALKABOUT INTERNATIONAL Local Guided Walks. Newsletter 231-SHOE. Free.
FULLERTON ARBORETUM Gardening Classes, Saturdays. May 1, 8, 15, & 22. 1900 Association Rd., Fullerton. 10-11AM. 714/278-3404. $7.
F.Y.I. DESERT WILDFLOWER HOT LINE Anza Borrego Desert State Park. 619/767-5311.
SAN DIEGO HORTICULTURAL SOCIETY Evelyn Weidner, Begonias. Satellite Wagering, Del Mar Fairgrounds. May 10. Mon. 6:30-9PM. 760/630-7307.

Deadline for submission to HORTICULTURAL CALENDAR for July/August issue is May 15. SAN DIEGO FLORAL ASSOCIATION is not responsible for changes that are submitted late by the organizations.

SAN DIEGO FLORAL ASSOCIATION TOUR SATURDAY 8 MAY 1999 HUNTINGTON LIBRARY, ART COLLECTIONS AND BOTANICAL GARDENS

Note the change of date for the above-mentioned trip. After our March/April 1999 issue of *California Garden* magazine went to press, we learned of the special orchid event scheduled for the second weekend in May—hence this change in date.

Besides the library and art galleries, the 150 acres contain over 14,000 plant species in a series of 12 special gardens. To name a few, there is a Shakespeare, jungle, subtropical, palm desert, and rose garden.

SPECIAL EVENT #1 - ORCHID FESTIVAL. Hundreds of exotic orchids will be on view here during this annual show. It will feature lush floral displays presented by local orchid societies and by three of the largest commercial growers on the West Coast: Zuma Canyon Orchids, Stewart's Orchids and Cal-Orchid, Inc. There will be sales of plants and related merchandise, lectures, workshops, and educational displays.

SPECIAL EVENT #2 - BACK TO THE GALLERIES. Here is one way to see Mount Vernon. A traveling exhibition will be here: TREASURES FROM MOUNT VERNON with 150 priceless items plus a 9′ x 4′ scale replica of Mount Vernon itself complete with scale model copies of the original furnishings.

Price: $33.00 members; $36.00 nonmembers. Lunch on your own. Where to eat? At the Tea Room (reservations required) or the cafeteria for hot and cold sandwiches, salads, desserts, and beverages. Pickups: La Mesa 7:30AM; San Diego 8:00AM; Carlsbad 8:30AM.

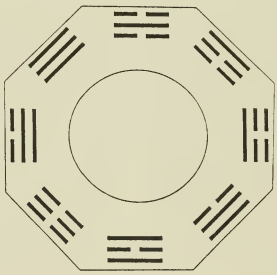
Additional tours: Tuesday, 22 June to the new Getty Center; and Wednesday, 3 November to Lotusland, in the Santa Barbara area. Refer to previous issues for order blanks or call 232-5762 for copies.

Gleanings . . .

POINSETTIAS . . .
The new poinsettias are lovely, but the old native Mexican poinsettias still can be found in gardens of many older homes. Now is the time to get canes, because most gardeners have cut the plant back in March and April. Just be careful to not put the canes in the ground upside-down. Many gardeners mark the canes with an up-arrow before cutting.

If you have not cut back your potted poinsettia—do it now. Leave about 8 inches. Keep watering the plant regularly but let the soil dry out between waterings. From May through October, at two to three week intervals, feed the plant a complete balanced fertilizer. If you want to transplant to a larger pot, do it in July or August. By the first of October be sure to place the plant where it will be dark for fourteen hours. To develop properly, it must have six hours of bright sunlight every day. If you do not have a proper place to put the plant, cover it with a large cardboard box for the fourteen hours of darkness. Poinsettias will not bloom unless they have the proper periods of light and dark.

FENG SHUI . . .
There is a lot of talk about it, but what is it? Basically it is the placement of objects in houses, offices, and gardens to provide a maximum of the universal life force, *ch'i*, which will induce happiness, etc. There appear to be several forms of *Feng Shui*, but they all use the same terminology: the five elements (fire, earth, metal, water, wood), *Pa-kua* (the magic square with nine boxes), *I Ching* (hexagram of lines used for divination and meditation), eight compass directions, and *shars* (the evil spirits that travel in straight lines). Unfortunately, *Feng Shui* masters do not all make the same conclusions. In one form, the recommended area for knowledge or studying was in the NE, in another form it was in the SW. At least they agreed that messiness and clutter obstructed good *ch'i*. My favorite artifact is the bright red Pa-kua mirror. A young Chinese friend explained that if an evil spirit sees itself in the mirror, it scares itself away. It is a charming idea and the mirror board is colorful. (I have a small one on my gate.)



Depending upon the source, *Feng Shui* began in China in approximately 3000 BC or in the seventh Century. The first time I heard reference to it was while taking a course in garden design in Tokyo in 1965. The professor explained that to understand the placement of objects in ancient Japanese gardens one should understand some of the principles. He said that most of them were based on common sense and gave the example of placing the hot kitchen on the cooler north side, or placing the house so that the largest space in a garden should be on the south, because it would get more sun.

Currently there are *Feng Shui* masters practicing, and several books have been written on the subject. (See Book Review section.)

TOMATOES . . .
New research shows that tomatoes contain the antioxidant lycopene. It makes tomatoes red. They also contain vitamins C, B, K, and beta carotene. Lycopene is more easily absorbed when cooked and when in the presence of fat. That is why pizza and spaghetti sauce have appeared on recommended food lists. Pink grapefruit, red peppers, guavas, and watermelon also are good sources of lycopene.

Experts say that vine ripened tomatoes have no nutritional advantage, so they can be ripened in a bag with an apple or banana that gives off ethylene gas that aids in the ripening process. But gardeners know that a vine ripened tomato taste best.

YELLOW FLOWERS . . .
Eastern garden designers and plant sellers are pushing yellow flowers this year. Apparently they feel that red-pink-purple, the usual garden color scheme, has been overdone and it's time for a change.

New flowers are on the market— deciduous yellow azaleas, a yellow miniature calla, yellow evening primroses, and yellow roses. There are even new yellow-leaved foliage plants. (Usually when the foliage on plants turns it indicates trouble.)

GARDENS OF THE GOLDEN STATE

BY MARIANNE D. TRUBY

THE 1999 FLOWER & GARDEN SHOW June 16 - July 5 to be presented at the **Del Mar Fair** is part of the Sesquicentennial Celebration of the California Gold Rush with a spectacular exhibit "Movin' to San Diego," featuring stories of how we came to San Diego and the vehicles that got us here including wagons, cars, trucks, boats, and planes.

Once again garden clubs will work with horticultural and agricultural industries of San Diego County to produce fabulous gardens at the Flower and Garden Show. These gardens exist for only twenty days and Southern California's leading landscape professionals participate in producing each year examples of what attracts flower lovers to the state in an ongoing world-wide rush.

The Del Mar Fair is the 11th largest Fair in the United States, the 2nd largest in California and the largest special event in San Diego County with more than one million visitors each year.

ZOOLOGICAL SOCIETY OF SAN DIEGO - The Wild Animal Park and the San Diego Zoo.

A horticultural paradise where the grounds and plantings enhance the beauty of the park while providing the right food for the animals. Plants are a major component of animal diet and the horticulture departments work to make the parks attractive and provide quantities of browse for the animals. The park is an accredited botanical garden. Much of the plant material is harvested at the Zoo and the Wild Animal Park and an additional special browse farm is maintained at Miramar. Not only can you enjoy the animals, but you will appreciate how important the horticulture department is with the animals benefiting from the staff expertise.

BALBOA PARK includes self-guided walks at the Wildflower and Butterfly garden at the east end of El Prado, between Reuben H. Fleet Space Center and the Hall of champions. The Kate O. Sessions, self-guided walk starts at the corner of Laurel St. and Balboa Dr. Pick up brochure at the Visitor Information Center, 239-0512.

For The California Native Plant Demonstration Garden, a garden and walking tour guide provide a small sample of the many drought-tolerant native plants suitable for the home landscape. Also excellent to assist in identification. Take Pershing Dr. exit off 1-5, left on Florida Dr., right on Morley Field Dr.

Visitors will enjoy all of these throughout the year. □

Marianne D. Truby has lived and gardened at her home in Chula Vista since 1955.

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Hundreds of consumer and agricultural information needs can be filled by consulting the newest catalog from the University of California's Division of Agricultural and Natural Resources (ANR). Its 96 pages feature nearly 850 research-based publications, posters, videos, and slide sets. Some publications are offered in Spanish and other languages.

To order the free 1999-2000 catalog, just write to DANR Communication Services, University of California, 6701 San Pablo Avenue, Oakland CA 94608-1239, call toll-free 1-800-994-8849, or e-mail to http://danrcs@ucdavis.edu. The catalog is also available from most county offices of UC Cooperative Extension (San Diego office at 5555 Overland Avenue).

Dozens of short ANR Communication Services publications are **free of charge** over the **World Wide Web** 24 hours a day. Here is what you need to obtain them:

1. Access to Internet.
2. Web browser software such as Netscape or Internet Explorer,
3. Free Adobe Acrobat Reader software, available from Adobe Systems Incorporated website at http://www.adobe.com/proindex/acrobat/readstep.html —
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J. Coleman

FOXY LADIES

BY CATHERINE L. ZINSKY

Digitalis purpurea 'Apricot'

INTRODUCED TO AMERICA FROM Europe in the 1700s, *Digitalis purpurea* escaped from the garden and became naturalized, rendering it the unfair byname of "Common Foxglove." It may be common in the wild, but is most certainly underutilized by the general gardener. Tall, stately, and eye-catching, foxgloves come in a plethora of sizes and colors to accommodate even the most particular of needs or tastes and really should become "common" in cultivation as well.

Digitalis purpurea is only one of about twenty species of foxglove, all belonging to the snapdragon family, *Scrophulariaceae*. A few are perennial; however, *Digitalis purpurea* is biennial. Biennials are plants that finish their life cycle in two years, generally dying after flowering and setting seed. But they do reseed—and can naturalize in your garden. One of my hardest tasks—because it breaks my heart—is thinning out foxglove seedlings every spring!

Digitalis purpurea is highly variable, containing hybrids, strains, and subspecies, each designed to fit a need or color scheme. To my knowledge there are no dwarfs, most ranging from 30 inches to 6 feet or more. The Foxy strain is the one most commonly found in nurseries, as it blooms quickly from seed (5-6 months). One of my favorites is *D. purpurea* 'Apricot'. The color is just that, apricot, which is soft enough not to overpower, but with enough color to enhance and enliven the back of a border. Since it grows to six feet, it does need to be in the back and given space.

I also introduced *D. purpurea* 'Alba' to my garden, a pure white strain lacking the speckled mottling customarily found on the inside of most foxglove blossoms. I discovered 'Alba' to be highly accommodating for floral arrangements.

Once the spike emerges from a rather wide basal rosette of leaves (this can range from 1-2 feet), the flowers will begin opening from the bottom up, even as the spike continues to develop. Hummingbirds love the large pendulous tubular blooms, which are copious. Each blossom is about 2 inches in length, and though the raceme is generally not covered front and back, but is more one-sided, the result is still sumptuous.

Once this main stalk has finished blooming, simply remove it, and generally a number of shorter racemes will emerge. This plant is determined to set seed and tries repeatedly until successful or thwarted by the onset of autumn.

The rosette of basal leaves is lance-shaped to ovate and is, indeed, what is powdered and used in the preparation of heart medication of the same name, digitalis. They are highly poisonous! Animals ignore and/or avoid the plant (the leaves render an unpleasant odor when bruised.) However, all caution should be taken with small children. I would recommend not growing it at all with small children about. The risk is hardly worth a flower, no matter how lovely.

Poisonous as it is, snails love it, but then they don't have a heart per se. Certainly I've never heard of a snail dying of cardiac arrest. Otherwise foxgloves are pest and disease free and therefore a welcome relief to grow and manage. They're also adaptable to most soils and sites, growing best in full to partial sun and moist, but not soggy, soils.

The more distinctive and extraordinary varieties of *Digitalis purpurea* are found rarely in nurseries and so must be started from seed. Most reputable seed catalogs offer foxglove, the most extensive selection probably being found in Thompson and Morgan. The seeds are tiny, but extremely easy to germinate, and can be sown now to ensure flowers by next spring. It's a plant I can't imagine my garden being without, affording it structure, color, and a natural feeder to lure the hummingbirds I value so much. □

Photograph by the author.

Catherine L. Zinsky gardens at about 1,900 feet in Crest. She is a free-lance writer for garden and canine publications.

EASY FLOWER ARRANGING

BY BARBARA S. JONES

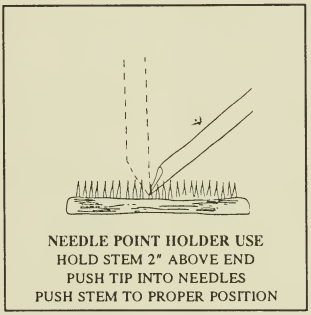
CUT FLOWER CARE

Freshly cut flowers should last one to three weeks. Whether you purchase your flowers or cut your own, there are things that can be done to prolong the life of the flowers. The most important thing is to cut the stems on a slant because if the stems seal against the bottom of the container they cannot take up water.

FRESH CUT; Try not to cut flowers in the heat of the day. If possible, carry a container (can or bucket) of room temperature water with you and immediately immerse the flower stems in the water. If this is not possible, hold the fresh-cut flowers upside down and immediately immerse in deep room temperature water when in the house. Let the flowers soak up water for an hour or so before placing in a vase.

PURCHASED BOUQUETS: Newly purchased flowers, no matter how fresh, have dried out and have been warmed in the delivery vehicle, the sales place, your car, or your hot hand. The minute you get home recut the flower stems and place them in deep luke-warm water. Don't shock them with cold water. Let the water cool before recutting the flowers for the vase.

VASE: Usually flowers can be attractively displayed in a tall container without using some type of holder. Just be sure it is clean.



NEEDLE POINT HOLDER USE
HOLD STEM 2" ABOVE END
PUSH TIP INTO NEEDLES
PUSH STEM TO PROPER POSITION

VASE WATER: The life of the cut flower can be shortened if the water becomes dirty or diseased. There are commercial products that can be added to vase water to prolong the flowers' life by both feeding the flower and helping to purify the water. Here are formulas to make your own solutions:

Formula I: 1 quart water, ¼ teaspoon chlorine bleach, ¼ can lemon-lime, sugar-sweetened soda.

Formula II: 1 quart water, 1 teaspoon sugar, 1 tablespoon lemon juice, ½ teaspoon chlorine bleach.

ARRANGING FLOWERS

The easiest way to display flowers is in a tall vase. An egg shaped one is very easy to use. Before you place the flowers in the vase, hand arrange them. To do this, pick up the flowers one by one and hold the flower stems in the other hand, placing the flower heads at different heights. When you have them all arranged, cut the stems (each stem at a slant) to the same length, and plop the whole thing into a vase. Allow the flowers to spread out. Purchased bouquets have often been hand arranged before the stems were secured and the whole placed in a protective covering. Flowers look better if they are not jammed together and have some green plant material included. If you do not have the flower foliage, ferns and sprays of small-leafed shrubs are attractive.

Do not be afraid to try. You will be surprised at how much you see. Humans like things to be harmonious and attractive. One of my teachers advised her students, "Squint your eyes and look at an arrangement and the bad part of it will show up." I always found this to be true. If one flower sticks out too far or is jammed in too closely, it "jumps out."

Sometimes a holder is necessary for the flowers to stand upright in a container. There are many kinds. There are grids of metal or glass that can be placed over the top of a container and the stems can be placed in the holes. Metal holders can be placed in the bottom of the container. The Japanese needle-point holder is very easy to use—a flat lead or iron base holds needles upright. The stem is impaled on the needles that hold it upright. Another bottom holder comes from England. The heavy metal base has stem holders that look like small springs that face in different directions. Both holders are moderately expensive, but can be used for many years. (Mine are over thirty years old.) One of the easiest holders to use is plastic foam. There are two kinds, be sure you purchase the one for use with fresh flowers. It comes in brick or rounded forms. It can be cut with a knife to fit any shape container. The foam holds water and the stems can be easily pushed into it. Flowers do not last as long when arranged in foam. It is important that the foam be kept wet. It should be soaked in a pan of water before using and water added regularly afterward—a turkey baster works well.

There are some general rules to follow if you want to make an attractive arrangement—most of them are common sense. Big flowers should be lower in the

arrangement; it will look top-heavy if they are perched at the top. Tall material with small flowers (or foliage alone) looks best as the tallest material. All the plant material should look stable, only naturally hanging material (like vines) should be hanging over the side of a container. You don't want the arrangement to look like it's falling apart. All flowers should not be pointed directly at the viewer. It is more interesting if some flowers are viewed from the side. They should never be allowed to hang over the side and look down. More is not better. A single rose is prettier that many jammed together so that all one sees is a jumbled mass of bruised petals. Remember, you have brought these flowers into the house to enjoy their beauty and odor as long as you can.

Do:

(1) Change water in vase every five to seven days, recut the stems if possible.

(2) Spry or sprinkle water on foliage, particularly if the area is heated or cooled.

(3) Remove dead flowers on multi-flowered stems.

Don't:

(1) Use a dirty vase.

(2) Jam flowers into vase, leave air space between them.

(3) Place arrangements in direct sunlight or in hot or cold drafts. □

"April Showers" by Dorothy Driscoll

THE WORTHY, WIDESPREAD JADE PLANT

BY ROBERT HORWITZ

THERE IS A RELATIONSHIP between the jade plant, whose genus name is *Crassula*, and the geranium in that they both flourish here in Southern California almost like weeds. Other places, where winters are cold, they are a hard-to-grow plant that is coddled indoors like a living treasure. They can be grown indoors here, too, and lots of people do just that if they do not have any garden space of their own to speak of. In addition to its ease of growing indoors or out in San Diego, the jade plant needs very little care for the pleasure it will give. It only requires water when its soil is almost completely dry, and even if you forget to water it, or have gone away on vacation, the most damage no water will do is to cause the leaves to shrivel just a little and maybe a few of the older leaves will fall off. If you grow it indoors, however, do not expect the plant to bloom. Blooming takes place in the spring on outdoor jade plants that have had a lot of exposure to sun and a minimum of water. The flowers are really nothing to write home about, but they do contrast nicely with the green of the leaves, being pinkish white in color. They will last for a few weeks and then brown and fall off the plant.

The jade can be propagated easily by breaking off a stem at a node and sticking it into potting soil composed of garden loam and sand and keeping the soil damp until rooting takes place. It is as simple as that! They grow slowly and the trunks can get to be quite big around. The stems and trunks are brittle and will break off under torque pressure. The ones that I have in my landscaping get very little water other than winter rain. They get no fertilizer, but continue to grow happily. If they do get dry during the summer, the leaves will turn a reddish brown around the edges, which is quite attractive.

There are several varieties of the jade, the two most common being the *Crassula argentea*, which has roundish leaves that are a good green in color and about an inch or two across. There is another version of this whose leaves are much smaller and more widely spaced. This one makes a good bonsai as it is forgiving of mistakes and has a basic bonsai character. Other varieties are the *C. arborescens*, which has gray-green, red-edged leaves, with dots. The *C. cultrata* is interesting because the leaves grow around the stem twisting in opposite directions, hence its common name, the propeller plant.

For those of you that want a good low maintenance plant for inside, or for that balcony garden, you can not go wrong with the jade plant. □

Robert Horwitz is a retired aerospace engineer who gardens in the Point Loma section of San Diego.

WINNING FLOWER ARRANGEMENTS

BY BARBARA S. JONES

HAVE YOU VIEWED a display of flower arrangements and wondered why the most beautiful one did not win? To answer that question one must understand the different kinds of flower arrangements.

FLORIST: If one sends flowers via the wire the local florist shows the sender pictures of arrangements that can be ordered. The request is sent to a member florist in the destination area. This florist makes-up the pictured arrangement and delivers it to the recipient. These arrangements are made of flowers and plant material that is readily available from any local supplier. Often, particularly for holidays or celebrations, the container is as important as the flowers. Florists do make custom arrangements for local distribution. When used in exhibits the displays often include other objects such as candles and the areas usually are draped attractively.

DECORATOR: These arrangements are seen in pictures advertising homes or furniture. It often consists of a tall glass vase crammed full of the stems of callas, daylilies, tulips, etc. with masses of flowers at the top or about half the length of the flower stem in a vase with the flowers drooping over the sides. It is not intended to display flowers but is used as a design element to complete a scene. A statue or a candle could be used but flower are "in" now. In exhibits by decorators, drapes of fabrics, ribbons, beads, etc. are used often to create a dramatic scene. The flowers may be displayed in unique positions.

IKEBANA (Japanese): These arrangements are traditional or contemporary. Arrangers study in flower arranging schools, but the rules in all are similar. In the traditional form the arranger learns to show off the total beauty of any plant or flower, even grasses. Though more flowers are used in contemporary styles, the individual beauty of the plant material is still emphasized. An arrangement can be made of one flower and two leaves and an arrangement of three flowers and five leaves or sprays of foliage are very common. Displays are not judged and arrangements are exhibited without drapes or accessories.

COMPETITION: Most arrangements seen in flower shows (not ikebana shows) are in competition. In the San Diego area, the rules agreed upon by the National Council of State Garden Clubs, Inc. are used. You will note that the arrangements are displayed in groups (classes) with a name. The arranger must try to express this name (theme) while following the NCSGCI rules. Unless the rules are met and the arrangement receives a score over 95 points (based upon 100) the arrangement cannot win a blue ribbon (first prize) though it is the most beautiful arrangement. Sometimes the rules for an individual group (class) require an artifact (items other than plant material used in or near an arrangement). Displays are exhibited usually without drapes or accessories. Arrangements (often called designs) made in the florist, decorator, or ikebana styles do not fit into these judging requirements.

To answer the question, the appropriate rules must be followed. In other words—though they all use balls, you can't win a baseball game using basketball or football rules! □

During the five years Barbara Jones studied ikebana in Japan she obtained a Masters Certificate from Ohara, traditional and contemporary certificates from Koryu (and was awarded a flower name, Rikyu), and a special certificate on historic ikebana while living and studying in the Saga temple in Kyoto. She is a former NCSGCI judge and has lectured and demonstrated flower arranging to schools, clubs, and civic groups.
Photo by Dorothy Driscoll

"Autumn Harvest" by Virginia Innis

BROMELIADS: THEIR HISTORY AND HABITAT

BY BILL BAILEY

BROMELIADS ARE MEMBERS OF the large plant group, the bromelia or pineapple family (Bromeliaceae), and their modern recorded history started in 1493. On his second voyage to the New World, Christopher Columbus discovered the edible pineapple under cultivation on the island of Guadeloupe in the West Indies. The exact original source of the plants is unknown, but it is believed that the natives of Guadeloupe obtained their stock from mainland South America. The explorers were so delighted with this delicious fruit that Columbus brought it back to Spain and presented it to Queen Isabella. It wasn't long before the demand for pineapple became widespread throughout Europe. The plant was cultivated in all the tropical colonies of Spain and became very important to the economy of that country. The pineapple was also carried on sailing ships around the world then as protection against the dreaded scurvy, and finally reached England by 1660 to be enjoyed by the rich as a greenhouse cultivar after 1720.

The Bromeliaceae was named by the French botanist Charles Plummier in honor of his friend, Swedish doctor Olaf Bromel, and Plummier also gave the pineapple its scientific name *Ananas comosus*. The other plants in the family were not appreciated by enthusiasts until much later as many varieties did not find their way into the United States until 1930. Currently, there are over 2,500 identified species and over one thousand hybrids.

In the Americas, we find bromeliads in the wild all the way from Virginia to the tip of southern Argentina. They grow in a vast range of environments and climatic conditions from tropical to subtropical, on sand along the ocean or on cacti in the dry desert areas. Many are found in the humid jungles growing as epiphytes on trees; using their roots to anchor, they derive no nourishment from the trees as they are not parasitic. Others are found growing in the ground as terrestrials, while others are **saxicolous**, clinging to rocks and cliff faces. They are found at altitudes ranging from below sea level to 6,000 feet.

All bromeliads have naturally occurring scales called **trichomes** on their leaves, which appear as a gray, silvery powder that forms attractive patterns. In some species, the scales can be seen with the naked eye, as in the case of the well-known *Aechmea fasciata*. With some other species it becomes necessary to use a magnifying glass or even a microscope to view the remarkable system of trichomes that perform several functions; they absorb atmospheric water through capillary action and act as a protection against transpiration to reduce the loss of water.

SOME WELL-KNOWN BROMELIADS

Tillandsia usneoides
Spanish moss

Ananas comosus
pineapple

Bromeliads are extremely versatile, forming a most adaptable family of plants. Their popularity is increasing as collectors and gardeners appreciate their hardiness, their resistance to disease and pests, and their drought tolerance. Their colorful foliage and inflorescence lasts from weeks to several months depending on the species, and their exotic look will enhance any patio and landscape year round. They are also used to beautify many interior spaces—from homes to hotels, shopping malls, and convention centers—sometimes in mass plantings. Due to their exceptionally long bloom (in some hybrids as much as a year) the *Guzmania* is especially prized by commercial growers and is in consistent demand where indoor plantings are difficult or expensive to replace.

Unfortunately, many native habitats of the Bromeliaceae are disappearing due to the continuous human destruction of the rain forest in many parts of Mexico, Central and South America. It was recently reported that the habitat of the genus *Canistrum*, a beautiful plant that forms a tulip shaped inflorescence, has been reduced to only 5% of its original area in Brazil. Because these plants are native to coastal areas, they will soon be included only in public parks and recreational areas in that country. Many

gardeners are also attracted to the idea that by growing these plants in their yard, they are saving a bit of the rain forest, and in their way contributing to the conservation of this amazing family of plants.

The Bromeliad Study Group of Balboa Park is working with San Diego Zoo Horticulturist Mike Bostwick to complete a beautiful landscaped area next to the children's zoo that has been designated the Leonard Kent Bromeliad Garden. Mr. Kent was a pioneer collector and has left an incredible legacy, including Kent's Bromeliad Nursery in Vista, which today is the world's largest bromeliad nursery. The Bromeliad Study Group supports the gigantic botanical resource at the San Diego Zoo by volunteering in the areas of plant maintenance and placement, thereby insuring the best possible display for Zoo visitors to enjoy.□

Bill Bailey is a former nursery and tree farm owner, and has been gardening since the age of two. He serves as Treasurer of the Bromeliad Study Group of Balboa Park, and Vice President of the Bromeliad Library, an affiliate of the Bromeliad Society International. He is certified as a University of California Cooperative Extension Master Gardener.

Canistrum sp.

Drawings this page by Yuko Green

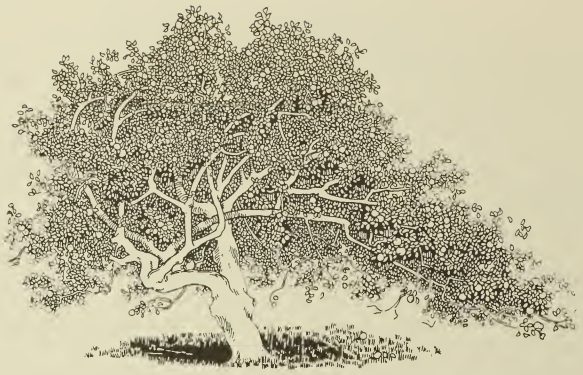
The Bromeliad Study Group of Balboa Park will hold their **Fifteenth Annual Show and Sale** on Saturday, May 29th from 11:00AM to 4:30PM and Sunday, May 30th from 10:00AM to 4:30PM at Casa del Prado, Room 101. This year's theme is **"Pineapples in Bloom"** and admission is free. Numerous varieties will be for sale, including the genus *Tillandsia*. Experts will be on hand to answer your questions. Proceeds from sales at this event will benefit the zoo garden at the San Diego Zoo and other educational projects that the Study Group supports throughout the year.

The May 11th meeting of the Group will feature as speaker Bill Palin, who is an original, living landscape designer at Lotusland. You won't want to miss this wonderful trip down memory lane as Mr. Palin discusses his numerous plant collecting expeditions and his most recent travels. For further information see Affiliates page.

A group of Bromeliads (Bromeliaceae), tropical America (ornamental herbs)

RAISING GOOD APPLES, PART II

BY SHEILA MARTIN



SNOW, HAIL, STRONG WINDS, and sporadic rains, springtime in Southern California. If our weather is an indication of La Niña, I have to tell you, I've had it with "weather children". El Niño gave me grief as we planted two hundred new apple trees last spring. The success of those trees will be determined as this season progresses.

My last article focused on the dormant phase of apple trees and I covered some pest control methods (March/April issue). Dormancy is one of two phases in the yearly cycles of deciduous fruit trees. The second phase, growth, is what we will explore in this issue. The tree rests during the dormant phase. In the growing phase, which begins with bloom, many processes take place: bud initiation and differentiation, shoot growth, and fruit set and development.

In California, dormancy ends during February. Fruit trees cannot be forced into growth by warm spells, dormancy ends when the chilling requirement is satisfied. The apples we grow in Julian require temperatures below 45° for about 1,200 - 1,500 hours. Of course there are varieties that do not require as many hours of chill. The precise time of bloom depends on variety, growing region, amount of chilling, and seasonal temperatures.

For the growth phase of our apple trees to be productive, we must be sure to provide both proper nutrients through fertilizing and enough moisture through rainfall and/or irrigation. When you feed your fruit tree, what you are doing is enriching the mineral elements in the soil. Nitrogen is the element most commonly in short supply, so it is the key nutrient in our fertilizer program. Fertilizers that are used for fruit trees will have a nitrogen amount such as 12-6-6 or 12-6-10. The first number is always nitrogen. There are straight nitrogen products: ammonium nitrate, calcium nitrate, urea, and ammonium sulfate.

A general rule of thumb is to use about 3/4 pounds of actual nitrogen for each mature tree (not dwarf) per year. This means that for a fertilizer having 12% nitrogen you will need to apply 6 pounds. This should be applied twice: one-half of the fertilizer in the spring and the other half after harvest or mid-June depending on variety. For dwarf trees follow directions on the fertilizer label.

When applying fertilizer make sure you start application at least a foot away from the trunk and apply evenly under the tree canopy. Cultivate the fertilizer in, if possible, and you must water thoroughly after each application. Animal manures can be used, but you must be aware of a high salt content and weed seeds that are contained in this form of fertilizer. You also need to apply great quantities to get the right amount of nitrogen needed per tree. For example, 100-200 pounds of cattle manure per tree for a full-size, mature tree.

A standard tree needs deep watering. Dwarf and semi-dwarf trees on shallow-rooted stocks may not need as much as a standard, but any tree must have a constant moisture supply. With our rainfall either excessive or drought like, an irrigation system of some form is needed. The relation between soil type, rooting depth, size of tree, climate, and method of irrigation affects the amount and frequency of irrigation.

There are many ways in which to irrigate your trees. The least expensive, but most labor-intensive are surface methods, such as furrow or basin irrigation. When digging your basin at the drip line, you must build a berm around the tree trunk to prevent water sitting next to the trunk. As your tree grows you also must extend the basin to meet the moisture needs of the larger tree. There are also irrigation systems such as sprinkler, drip, and micro/mini sprinklers. The system you choose depends on cost, orchard location, soil type, depth, and rootstock. Maintenance should always be a consideration when you install any system.

To conserve the water you provide, no matter the

delivery system, I would suggest spreading an inch layer of mulch under the canopy of the tree, keeping the mulch at least six inches from the trunk of the tree. This also helps to keep the weeds down, and if you use an organic mulch, it will rot and improve soil texture.

I would like to share a few things to be aware of during your tree's growth phase. During bloom your apple tree has two kinds of buds: vegetation (leaves) and mixed. Mixed buds contain both flowers (fruit) and leaves and occur primarily at the tips of spurs and less on the tips of new shoots. As the buds open and flowers emerge, I would keep activity around the trees to a minimum. Pollination occurs during this time. With normal bloom density only five to ten percent of the blossoms produced by an apple tree are needed to set a full crop.

My next article will cover pollination, fruit growth, fruit thinning, and harvest. Meanwhile, enjoy your trees. They will reflect the care you have given them. □

Sheila Martin manages Fieldstone Farm in Julian: an 85-acre farm of diverse produce. She is continuing her education in horticulture at Cuyamaca College. Illustrations by J. Foord.

DANDELION

(TARAXACUM OFFICINALE)

WRITTEN AND ILLUSTRATED BY VALERIE ALMOND

SUNFLOWER OR COMPOSITE FAMILY (Compositae)

OTHER COMMON NAMES: Common Dandelion, Blowball

HABITAT: Throughout North America, especially in lawns, fields, along roadsides, and in gardens.

FLOWERING SEASON: Early spring through summer and fall.

DESCRIPTION: Dandelion grows from a thick taproot. The stem is hollow and discharges a milky juice when broken or cut. The leaves are coarsely toothed and form a rosette cluster. The flower is yellow and has many small petals.

EDIBLE PARTS:

1) Roots (best before the flowers appear)
2) Young leaves (best before the flowers appear)
3) Flowers

PREPARATION:

1) Roots are best if dug up in early spring before the flowers appear. They are carrot shaped and can be cooked like carrots. You can season the cooked roots with any of the following seasonings:

Allspice	Dill
Caraway Seed	Nutmeg
Celery Seed	Poppy Seed
Chives	Savory
Curry	Tarragon
	Thyme

They can be dried (for about 1 month), then roasted whole until they are dark brown inside, then ground for a caffeine-free coffee. Brew as you would regular coffee, adding sugar and cream if you wish; or add instant cocoa mix for a different flavor.

2) Young leaves can be eaten raw (as in a salad) or cooked as a green. If the greens seem bitter, change the water once, then reboil. Top with butter and vinegar or any of the following seasonings:

Allspice	Marjoram
Basil	Nutmeg
Cinnamon	Oregano
Dill	Rosemary
Mace	Sesame Seed

The juice from the boiled leaves is very nutritious to drink. The young leaves also can be used as a potherb.

RECIPE

6 cups young dandelion leaves
½ cup finely chopped bacon (or bacon bits)
½ cup sour cream

Boil the leaves and bacon together for 15 to 20 minutes, strain then top with sour cream. Add a dash of pepper and salt. The bacon can be omitted and any of the above seasonings used instead.

3) Flowers can be dried to use for tea. They also can be used to make wine.

DANDELION WINE

8 cups dandelion flowers
1 gallon boiling water
4 lbs. sugar (about 4 to 5 cups)
2 tablespoons powdered yeast

Place flowers and sugar in a large container or crock. Pour the boiling water over the flowers and sugar. Mix well. When cool, mix in the yeast. Stir well (about 5 minutes). Let wine stand uncovered for 10 days, stirring at least twice a day. Place wine into bottles (trying not to agitate sediment). Place the lids on **loosely**. Open bottles several times a day to release any gas. The wine is ready to be sealed when no gas is released when you open the bottles (about one week later).

DANDELION TEA

6 cups dandelion flowers (dried)
⅓cup cinnamon ground (optional)
½ cup dried orange rinds chopped (optional)

Use 1 to 2 teaspoons tea per cup of hot water. Store remainder of tea in an airtight container.

VITAMIN/MINERAL CONTENT: Dandelions contain large amounts of vitamins A, B, C, and E. They provide an excellent source of potassium, calcium, and sodium.

MEDICAL USES: the Latin name *Taraxacum Officinale* means "the official remedy for disorders." The medicinal property is the white juices of the dandelion. Dandelion tea can be made very strong and used as a laxative. The roots can be brewed into a tea that relieves heartburn.

MISCELLANEOUS USES: In many parts of the country, dandelions are being cultivated in gardens for the greens. In the Northeastern part of the United States, the greens are being sold in the produce sections of regular supermarkets. □

Valerie Almond is an illustrator in Portland, who has done pet portraits, wildlife illustrating, signs, logos, business card designing, and other artwork.

Now is the Time . . .

A CULTURAL CALENDAR OF CARE FROM OUR AFFILIATES, UC COOPERATIVE EXTENSION, AND *CALIFORNIA GARDEN* STAFF

AFRICAN VIOLETS
Helen La Gamma

NOW IS THE TIME

TO WATER only when soil is dry.

TO REPOT only if necessary.

TO TAKE the time to groom your violets by removing the lower row of leaves and all flower stems.

TO SEE that you have proper soil: light, porous and with good drainage.

TO PUT all plants on wicks using a 3½ to 4 cup reservoir.

TO HAVE 12 to 14 hours of light daily.

TO HAVE proper spacing—provide room for good air circulation.

TO USE good fertilizer according to the instruction at each watering.

BEGONIAS
Margaret Lee

NOW IS THE TIME

TO WATCH tuberous begonias for signs of mildew, correct with dust and spray.

TO CHECK cane type begonias and cut back if needed.

TO SPRAY for insects using malathion.

TO FINISH repotting where needed; use a light porous mixture.

TO FEED plants with a well-balanced all-purpose fertilizer.

TO WATER as needed—keep moist but *not wet*.

TO CHECK tuberous type for drainage; repot to larger container if needed, add fresh soil. Stake any tall stems.

BONSAI
San Diego Bonsai Club, Inc.

NOW IS THE TIME

TO DEVELOP a watering schedule, but avoid overwatering, especially the pines.

TO PRUNE all trees to promote growth and shape. Tip prune junipers and pines using finger pruning instead of cutting tools that cause brown tips.

TO SPRAY for insects as needed, using either a systemic or a mild surface insecticide.

TO SHAPE deciduous trees. Defoliate the deciduous trees in June. They may be transplanted afterwards.

TO CONTROL any mildew that may appear; use sulfur or a spray.

TO FERTILIZE trees with an organic fertilizer. Do not overfeed the pines.

TO COMPLETE the repotting of all trees that have not been repotted, except for the flowering trees that have not completed their blooming cycle.

TO PLACE trees to receive optimal sun, but do not place in full sun after 11:00AM to prevent sunburning.

TO ROTATE trees often to maintain proper shape.

BROMELIADS
Mary Siemers

NOW IS THE TIME

TO FERTILIZE the outdoor plants during warm months only. Plants in greenhouse can be fertilized year-round.

TO USE a water-soluble fertilizer—preferably one high in acid, using only ½ the recommended strength on label.

TO CUT new offshoots to make new plants during the summer when weather is warm. Offshoots must be ⅓ to ½ the size of the mother plant.

TO KEEP plants clean at all times by cutting spent blooms and dead leaves—this helps to keep plants healthy.

TO CHECK plants for scale. If needed treat with Cygon 2-E according to directions on the bottle. If scale remains give same treatment in two weeks.

TO GIVE plants plenty of air circulation and provide humidity by watering the ground around plants.

CACTI & SUCCULENTS
Joseph Betzler

NOW IS THE TIME

TO WATER plants, but not too wet. When pots get noticeably light in weight, water them.

TO FERTILIZE for growth and flowering. Allow the winter growers to go dormant and rest before feeding.

TO PROTECT the plants from brilliant sun. Shade cloth can keep plants from being bleached out on very hot days.

TO CHECK any additions to your collection for insect pests. Keep them away from rest of plants. If pests or disease are noticed, treat at once.

TO REPOT those plants needing it; use a well-draining mix, but do not overpot. A good rule of thumb is to allow an inch between plant and the pot.

TO REPOT seedlings when they have doubled or tripled in size. If they have been in the same mix for over six months, it is a good idea to repot.

TO CHECK entire collection for any pests or disease; if so, treat at once to avoid an infestation.

CAMELLIAS

E. C. Snooks

NOW IS THE TIME

TO START a feeding program when they finish blooming. Use an acid-type fertilizer: cottonseed meal, camellia food, or liquid fish.

TO BE SURE to water well the day before feeding, never fertilize a dry plant.

TO TRANSPLANT those plants that have not started their new growth.

TO REPOT those plants that have outgrown their pots. Move to one size larger pot per time.

TO MULCH plants well with redwood compost or pine needles. This helps to keep the soil uniformly moist and the weeds down.

TO PRUNE out unwanted new growth; shape and thin out center.

TO SPRAY for insects as they appear; use Cygon for looper worms and aphids. Use a miticide if mites appear later.

TO ESTABLISH and maintain a uniform watering routine. Plants should never be allowed to go dry.

DAHLIAS

Abe Janzen

NOW IS THE TIME

TO FEED with low nitrogen fertilizer (4-10-10), either dry or liquid.

TO SPRAY weekly to control insects. Guard against leaf miners, thrips, and aphids. Try a systemic; if spraying, use a weak solution on new foliage.

TO WATER when top of soil is dry; when buds are forming, soak deeply and often.

TO PLANT smaller varieties and give regular care for growing.

TO BE SURE to draw the soil up around the plants as they grow.

TO PINCH out centers of plants when two or three sets of leaves have developed.

EPIPHYLLUMS (Orchid Cactus)

Abe Janzen

NOW IS THE TIME

TO PRUNE plants to shape—take cuttings after flowering.

TO PUT out snail bait and watch for other pests.

TO REMOVE wilted flowers by cutting about ¾" out from leaf unless you desire seed to form.

TO TAKE CARE in watering, do *NOT* allow to dry out; keep soil damp, but *NOT* wet.

TO GIVE plants a balanced feeding after blooming season.

TO STAKE long spindly growth.

TO PROTECT foliage from the hot summer sun. Maintain plants in filtered sunlight.

FERNS

San Diego Fern Society

NOW IS THE TIME

TO REMOVE dead fronds.

TO PLANT spores.

TO USE a high-nitrogen fertilizer liquid or pellets twice a month.

TO SPRAY for aphids and scale if necessary.

TO WATER thoroughly; maintain humidity by watering surrounding areas.

FRUIT TREES AND VINES

Vincent Lazaneo, Hort. Advisor, UC Coop Extension

NOW IS THE TIME

TO IRRIGATE thoroughly as needed to maintain adequate soil moisture. Apply water around mature trees in a broad band beginning ⅓ of the distance from the trunk to the tree's drip line and extending out beyond the drip line a few feet. Apply enough water to wet the soil at least 2 feet deep (about 3 inches of water on a loam soil).

TO REMOVE grass and weeds from soil under a tree's canopy.

TO APPLY a layer of organic mulch on the soil under trees to conserve moisture. Keep mulch at least one foot away from the trunk to protect trees from crown rot. Complete thinning apples, pears and stone fruit after "June drop."

TO REMOVE any suckers growing from rootstock.

TO WASH trees periodically with a forceful spray of water to remove dust, honeydew and pests like aphids, whiteflies and spider mites.

TO SPRAY walnuts with carbaryl (Sevin) when nuts are about the size of a nickel and again three weeks later to control coddling moth larvae (wormy nuts).

FUCHSIAS

William Selby

NOW IS THE TIME

TO PINCH plants for shape and bushy growth.

TO CHANGE to 5-10-10 fertilizer to hasten maturity.

TO WATCH for insects and pests. Spray or use a systemic eradicator; use amount recommended by manufacturer or less, do *NOT* use an oil spray.

TO BE SURE to water an hour or more prior to application of an insecticide.

TO CONTROL snails, use metaldehyde or other bait according to directions.

TO KEEP plants clean of debris and spent blooms.

TO TURN baskets regularly so they do not become one-sided.

TO WATCH plants on hot or windy days. Do *NOT* allow them to dry out; keep damp but *NOT* WET.

GERANIUMS (Pelargoniums)

Carol Roller

NOW IS THE TIME

TO WATER thoroughly when plants become somewhat dry. Allow the excess water to drain away. Keep foliage as dry as possible. Provide the best possible drainage for the plants, both in containers and the landscape. Watch for botrytis (gray mold) and treat it immediately.

TO CONTINUE feeding with a balanced fertilizer containing micronutrients. Dissolve in water, using less than the recommended strength. Use often enough to keep plants growing well. Long term pellets may be used instead.

TO CONTINUE pest control and disease prevention, using all products according to the manufacturer's directions.

TO SELECTIVELY prune and pinch ivies and zonals for future bloom. Avoid cutting regals and scenteds because this is their flowering season.

TO MAKE cuttings from the ivy and zonal prunings, if desired.

TO REMOVE faded flowers and old, discolored leaves.

TO ROTATE pots on a regular basis in order to produce well-shaped plants.

TO ENJOY your plants at the height of their season.

HERBS

John Noble

NOW IS THE TIME

TO MAKE a cup of tea. Use fresh green spring herbs, comfrey, sage, mint.

TO HARVEST salad green herbs, dandelion, salad burnet, french sorrel, dill, basil.

TO FINISH any heavy pruning before the long hot dry summer gets strong.

TO FILL in any bare areas with summer growing herbs, basil, cayenne, parsley, valerian, fever few.

TO MULCH with organic compost.

TO PLAN to attend the annual herb festival at Quail Botanical Garden in June.

IRIS

San Diego/Imperial County Iris Society

NOW IS THE TIME

TO ALLOW cut surfaces of the rhizomes to dry and be exposed to sunlight before planting or give a light dusting of soil sulfur. May be placed in vitamin B solution for awhile before planting.

TO HAVE beds prepared for planting and transplanting. Work in humus, soil sulfur, and some decomposed manure.

TO WATCH for aphids. May use a systemic insecticide.

TO FEED spurias with a low-nitrogen fertilizer.

TO KEEP watering all iris that are still blooming.

TO FEED Siberians after blooming with a balanced fertilizer to assure bloom for next year.

TO FEED Louisianas with a balanced food, but wait until June to dig and transplant.

TO FEED Japanese iris with camellia food; add to water in which they are growing.

NATIVES

Jeanine De Hart

NOW IS THE TIME

TO BEGIN to cut back on water. This month marks the end of our rainy season, such as it was. *Fremontodendron, Dendromecon* and *Trichostema* want no water through the rest of the summer unless your drainage is absolutely perfect. Most other natives will want water every 2-3 weeks depending on location, wind, and other factors.

TO BAIT for snails around any plants that are prone to attack. If you don't want to use poison, consider using "killer" snails. When they polish off our garden snails they will eat plant material, but only what they can reach crawling as they don't climb.

TO WEED diligently as the weather conditions are perfect for weeds to grow. They use valuable nutrients found in the soil more proficiently than do the natives. Go to a green waste site and bring in good mulch. Put several inches around all your shrubs and perennials. That will help keep the weeds down.

TO CHECK for insect activity on vulnerable species. Mealy bug, *(Planococcus* sp)., seems to be one of the most destructive on young *Ceanothus* as well as other plants. Ants farm them for their honeydew and move them from place to place. The good bugs, such as mealybug destroyer, (*Cryptolaemus montrouzieri*) will take care of them if you don't use poison. **CAUTION**: Mealybug destroyer is the larva form of a beetle, but looks so much like a mealybug it is often confused with one. The destroyer moves rapidly which certainly isn't the case with mealybug, which is mostly sessile.

TO BEGIN to plan for fall planting and to be

prepared to take advantage of all the great fall sales of native plants. If there is a drainage problem, plant *Mimulus guttatus,* which loves having wet feet. No matter if it is dry as a bone all summer. This monkey flower will die off and come back. There is a native for virtually every situation you can think of.

ORCHIDS

Charles Fouquette

NOW IS THE TIME

TO OBSERVE the weather—be prepared to shade areas of heavy sunlight, use shade cloth or liquid shading compound on glass or overhead.

TO MAINTAIN pest control against red spider, mealy bugs, and scale; consider getting some ladybugs or praying mantis egg cases—available at some orchid nurseries in the area.

TO AVOID sudden temperature changes or drafts around plants. Spray and mist on hot dry days; mist seedlings and small plants—mist in the morning and afternoon, plants should be dry by nightfall.

TO REMEMBER that plants need good air circulation and proper light.

***Culture of Different Genera*:**

Cymbidium: Light to partial shade to full sun, protect flowers from sunburn. Temperature 50°–70°optimum. Humidity 40–70%. Potting media; epiphyte-tree fern, fir bark, non-organic mixes or osmunda. New fertilizers have been developed and should be available.

***Cattleya, Laelia, Brassavola* and Hybrid:** Light 2400–3600 foot candles. Temperature 69°–70° optimum. Media for potting: fir bark, tree fern, osmunda, gravel, perlite or charcoal. Fertilizer depends on type of media used to grow your plants.

***Phalaenopsis and Hybrid*:** Light 900–1000 foot candles. Shade to adjust and meet requirements. Temperature 65°–85°, humidity 50–75%; remember the higher the temperature, the more circulation of air is required.

***Vanda, Vandopsis, Ascocentrum, Aerides* and Hybrid:** Light 2000-3600 foot candles. Temperature 60°-70° humidity 49-75%. Potting media: tree fern, fir bark, charcoal, lava rock, or a combination of these. Fertilizer depends on media used. Vandas are voracious feeders and growers when right combination is used.

ROSES

Marianne Truby

NOW IS THE TIME

TO ENCOURAGE summer roses by "dead heading," the prompt removal of flowers as soon as they begin to fade. To direct the rose to produce more flowers instead of seeds (hips).

TO CUT blooms at their peak and SHARE with friends and neighbors.

TO PROTECT the new basals that were beginning to grow from the bud union during the early bloom. Avoid letting these grow into a large candelabra. Remove side buds, allowing one bloom and then cut back to an eye emanating from a high five-leaflet. Treat this growth with care. It is your new wood for next year's blossoms.

TO CONTINUE to maintain a well-balanced feeding program and keep ahead of the mites and mildew by washing off your bushes in early morning.

TO MAINTAIN a vigilant watch for rust on the undersides of your foliage! It is imperative that you maintain a clean area around bushes to control rust. It spreads quickly and removing infected materials and keeping other herbaceous away from your roses will best minimize the threat.

TO WATER your roses according to their needs and your location, usually at least twice a week in the drip line of each bush.

TO DISCARD varieties and bushes that fail in your garden and replace with new bushes.

VEGETABLES

Vincent Lazaneo, Hort. Advisor, UC Coop Extension

NOW IS THE TIME

TO PLANT warm-season crops which require warm weather and soil for rapid growth: beans, corn, cucurbits (cucumber, gourd, luffa, melons, and squash), peanuts, peppers, sunflower, tomatoes and tender herbs.

TO PLANT pumpkins in late June for Halloween. Stop watering onions and garlic grown for bulbs when leaves begin to turn yellow. Dig bulbs when tops have fallen over and place in a shady, well-ventilated area to cure.

TO APPLY nitrogen fertilizer to warm-season crops to promote growth. Fertilize when: corn is 6 inches tall and 24 inches tall; cucurbits when plants begin to produce runners; eggplant, peppers and tomatoes when plants begin to bloom and again a month later; beans for a month after planting or when runners start to climb. For every 10 feet of row, apply ⅓–½ cup of ammonium sulfate or ¼–⅓ cup of ammonium nitrate alongside the row a few inches from the plants, then irrigate thoroughly.

TO CHECK plants for pests. Dust tomatoes lightly with sulfur when plants are a foot tall to control russet mites (older leaves die prematurely). Apply sulfur with a dust blower when wind is calm. Wrap paper collars around the stems of tomato transplants when planted to protect them from cutworms.

(continued on page 84)

"Now Is the Time" continued from previous page

VEGETABLES, ANNUALS
from UC Cooperative Extension Publications
NOW IS ONE OF THE BETTER TIMES IN FROST-FREE AREAS

TO PUT IN TRANSPLANTS OF: eggplant, sweet potato, tomato — African daisy (*Arctotis stoechadifolia),* celosia, centaurea, coreopsis, marigolds, nicotiana, petunia, salpiglossis, salvia, scabiosa, sunflower, and tithonia.

TO PUT IN SEEDS OF: beans, corn, cucumbers, endive, leaf lettuce, melons, okra, onions (green), parsley, parsnips (in May), peppers, radish, squash (winter and summer), turnips — ageratum, amaranthus, balsum, coleus, cosmos, dahlias, four o'clocks, mignonette, morning glories, nasturtiums, portulaca, strawflowers, sweet alyssum, Virginia stock (*Malcomia maritima*), and zinnias.□

COMMUNICATIONS . . .

WE WELCOME LETTERS PERTAINING TO GARDENS!

We request comments from readers who feel that we have provided incorrect information. The goal is to give readers the best gardening knowledge available.

ERRATUM

It has been drawn to our attention that in November-December 1998 issues of the magazine, the credit for a photograph of goldenbush on page 170 should have been given to Robert S. Lauridsen.

REGARDING CATHERINE ZINSKY'S ARTICLE ON FOXGLOVES

You may be asking yourself why they are called "foxgloves." Searching several books, the only serious mention that I found is in L.H. Bailey's *Standard Cyclopedia of Horticulture* of 1947. Bailey says that the "glove" part comes from the Latin *digitalis*, meaning finger of a glove, referring to the shape of the flowers. He writes, "The name 'foxglove' is so inappropriate that much ingenious speculation has been aroused, but its origin is lost in antiquity. The word 'fox' is often said to be a corruption of 'folk', meaning the 'little folk' or fairies. Unfortunately, etymologists discredit this pretty suggestion." Besides the theory above, in *Decorative Plant and Flower Studies for Artists and Craftsmen*, Jeanie Foord mentions also the theory that it is a corruption of "Fuch's" glove, so called after the German botanist of the sixteen century.

A NEW PUBLIC GARDEN IN EAST COUNTY

A Docent Training Class for the Water Conservation Garden at Cuyamaca College in El Cajon provides an opportunity to participate in an exciting program of sharing specific garden information with others. The classes will be held on Saturdays from 9:00AM to 12:00NOON, June 5 through August 14, 1999. Docent duties include Garden Tours, Gift Shop operation, office duties, etc. For more information, call 619/448-1915.

GARDENERS NEEDED: HELP EXCAVATE AN EARLY FRONTIER FORMAL GARDEN IN WEST VIRGINIA

The nonprofit Earthwatch Institute is recruiting volunteers interested in traditional gardening to help archaeologist Dr. Gloria Gozdzik, of West Virginia University, in an excavation of one of America's earliest formal gardens, on Blennerhassett Island, West Virginia, this summer.

Created by an English gardener, completed in 1790 on the western edge of the new country's frontier, this ornate garden was called "Eden." Volunteers will work on all phases of the garden excavation, including excavating, digging, screening, and record keeping.

Three teams will work on the project over the summer with Gozdzik for two weeks each. Dates are: May 23-June 5; July 11-24; and July 25-August 7. Each volunteer contributes a tax-deductible share of costs of $1,695, which includes lodging and meals in a comfortable house near the excavation site. More information can be found at Earthwatch's website — http://www.earthwatch.org/expeditions/gozdzik.html

Earthwatch Institute is a nonprofit volunteer organization founded in 1971 that sponsors scientific field research worldwide. This year, some 4,000 volunteers from forty-six countries will help university scientists with their fieldwork in twenty-three states and fifty-one countries. For more information, call — 1-800/776-0188, write 680 Mt. Auburn Street, PO Box 9104, Watertown MA 02471, or explore the website at http://www.earthwatch.org .

Book Reviews

FENG SHUI IN THE GARDEN
Richard Webster

Llewllyn Publications, St. Paul MN, 1999, 192 pages, illustrations, 5¼" x 8", paperback, $9.95

Richard Webster, from New Zealand, writes books and travels worldwide lecturing and conducting workshops on psychic subjects. This is his fourth book on using *feng shui*. Currently *feng shui* is used as a practice of placement that will make life better. In this book Webster explains *ch'i* (universal life force); the five elements (fire, earth, metal, water, wood); *pa-kua* (the magic square with nine boxes); *I Ching* (hexagram used for divination and meditation); the eight compass directions and their colors; and *shars* (the evil spirits that travel in straight lines). Tables and charts are included so one can determine their personal element and compass direction, and instructions are given on how to use the information to create a garden tailored to bring the greatest amount possible of positive energy. This book is easy to read and, if you are curious, in a short time it is possible to gain an understanding of *feng shui*.

Reviewed by Barbara S. Jones

PLANTS FOR SMALL SPACES
Stephanie Donaldson and Susan Perry

North Pomfret, Vt., Trafalgar Square Publishing, 1998, 144 pages, 300 color photos, 8½" x 11½", hardcover, $29.95

Having the opportunity to review this title and having recently visited a new community filled with homes on small lots with no trees, no grass, and only occasionally a "low-maintenance" shrub, I would only hope the new homeowners would have access to the challenge and ideas expressed in this exceptional book. Too often the would-be gardener is overwhelmed by the colorful picture books and magazines with little practical information. Here in Southern California where gardening is a year round experience, the need for seasonal planting is paramount to maintain color and interest twelve months of the year. With information on planting concepts using focal points, seasonal displays, and instant effects including containers, doorways and steps, walls, corners, window boxes, balconies, and patios you will be inspired to create beauty on even the smallest of sites.

In the section on gardening basics, included are suggestions for purchasing container plants, propagation and cuttings, and fertilization. The authors encourage the use of a variety of plant forms, from small trees to climbers, depending on the setting. Suggestions for climbers and wall shrubs are described and pictured including their growing habits. The use of foliage plants to act as backdrops to the flowering plants and for shady areas with examples of trailing plants for hanging baskets to give an additional dimension are pictured and described. Plant lists are categorized according to type (tree, shrub, perennial, etc.) The glossary and the index are an added feature especially helpful to preparing for the challenge of creating this small garden that suits you and your lifestyle. If I could, I would present this as a gift to the many new homeowners striving to create beauty and to aid in controlling air pollution by growing and maintaining their gardens. The colorful photos entice and the text is concise and informative.

Reviewed by Marianne D. Truby

IN THE FRENCH KITCHEN GARDEN: The Joys of Cultivating a Potager
Georgeanne Brennan

San Francisco, Chronicle Books, 1998, 119 pages, 7" x 8", hardcover, over 60 color illustrations, $18.95

This pretty little book celebrates the art of growing food as a lifestyle choice, as well as a horticultural and culinary one. Influenced by years of living in the Provence region of France, the author rhapsodizes on the pleasures and satisfaction of gathering food from the garden just before preparing it for the table. To do this throughout the year, a method of overlapping growing seasons needs to be developed and Brennan explains how to manage a continuous growing cycle that, since she now lives in Northern California, can readily be applied to local gardens.

Besides leaving a fifth of the garden fallow for the next season's planting, Brennan recommends sowing seeds under mature plants, so that seedings are protected and then can be thinned as they grow, even using some young plants as seasonings or garnishes, so that eventually there is room for a sufficient number of mature plants. Detailed information on planting each vegetable and herb is followed by recipes for using them in soups, salads and entrees.

Charming watercolor sketches embellish and illustrate the text, providing a decorative accent that expresses the essence of the subject at hand.

Reviewed by Marge Howard-Jones

A CELEBRATION OF HEIRLOOM VEGETABLE: Growing and Cooking Old-time Varieties
Roger Yepsin

New York, Artisan, 1998, 192 pages, 10¼" x 10¼", 50 color illustrations, hardcover, $35

A passion for the history of heirloom vegetables and the exquisite beauty of all their forms, from seed to leaf, inspires this book. The author gives ample space to a discussion of the merits of growing food that provides viable seeds for its own reproduction, (as opposed to hybrids that only offer sterile seed), but it is plainly the romance of these vegetables, the

stories of their origins and their place in our cultural life that are closest to his heart. He is on an acknowledged mission to preserve such old species as the moon and star melons, the Cherokee Trail of Tears beans and the Coxton Crofter rutabagas.

A long introduction chapter on general methods, seed saving and harvesting precedes a catalogue of each vegetable type, complete with elegant watercolor renderings of each variety. While all three carrots are somewhat similar, the range of size, shape, and color of such old familiars as beans, eggplants, tomatoes, and potatoes are gorgeous to behold in these pages. Of particular note are the delicate colors and designs on more than twenty types of dry beans. Specific planting instructions for each vegetable are followed with recipes for using them. Catalogs and other seed resources are listed and described at the end of the book.

Reviewed by Marge Howard-Jones

THE HEALING GARDEN: Nature's Remedies & Cures

Helen Farmer-Knowles

New York, Sterling Publishing Co. Inc., 1998, 143 pages, 7½″ x 9″, softcover, color throughout, $14.95

The Garden Healer carries on a tradition of a "horti-medical" chest using whatever is seasonably available. The book is not intended for prescribing medicine, nor for curing afflictions. It is intended as a reference source for medicinal plants that are used in herbalism by qualified practitioners. The author warns not to attempt self-diagnosis or self-treatment for any serious illness without consulting a qualified herbalist or doctor. The book thoroughly covers trees, hedges, shrubs, vegetables, and herbs. The author has published a list of poisonous plants, plant cautions, and a plant name index. Another warning the author has for the reader is to check the warning symbols on the relevant pages as they refer to plant cautions.

The beautiful photographs were taken by Deni Brown and can be used for plant identification. From your garden you can find all the main ingredients for remedies and recipes for everything from cramps to flu, from muscle aches to acne.

The book is easy to read and thorough about each plant—giving healing uses as well as home uses.

Reviewed by John Rojas, Jr.

DESIGN AND PLANT A MIXED BORDER

Noel Kingsbury

New York, Sterling Co., Inc., 1997, 160 pages, 8″ x 10½″ color photos, hardcover, $29.95

Mixed borders are the heart of today's ornamental garden. This book takes you through every aspect of starting a border. There are guides to help plan a specific type of border. Plant charts help ease your many decisions. Choosing plants to suit your site could include theme planting, such as color, scented plants, aromatic foliage, or plants of seasonal interest. Detailed charts for colored borders include choices of red, yellow, blue pale pinks, or a silver grey foliage. Yet more charts help with planting in coastal areas, sun, shade, summer drought, alkaline soil; nothing seems left to chance. This book has great resources and very few of the plants listed are not applicable to our immediate area.

Reviewed by Jean E Johns

MEDIEVAL FLOWERS

Miranda Innes

North Pomfret, Vt., Trafalgar Square, 1998, 160 pages, 9½″ x 10½″ 140 color photos, Hardcover, $35

Medieval folk, whether living in cottage or castle, looked to flowers to tell them of the passage of the seasons. As the year progressed, so did the cycle of flowers, providing a sense of order and appreciation for beauty to lives that, for the most part, were far from easy and dependent entirely upon their own powers of observation for an understanding of the world. Flowers became interwoven with myths and customs as well as the essentials of daily living; it was the practical uses of plants that were most important to the people of the Middle Ages before 1500.

Innes presents the world of the tenth to the sixteenth centuries, outlining historical events and quoting botanical treatises as well as literature and poetry. Examples of medieval art in painting and tapestry display floral reproductions and motifs as accents to the stunning photography that illustrates the text. Going from Spring to Early and Late Summer, Fall, and Winter, the author describes the blooms of each season and their uses, from culinary and medicinal to rituals and alchemy. An explanation of the harvesting of saffron from the stigma of the crocus makes plain the basis for its high price. At the other end of the practicality scale was iris, from the symbolism of virginity and the Virgin Mary in white iris, to the use of orris (iris root) for perfume, chest complaints, and ink, the weaving of its leaves into seating, strewn floors, and thatched roofs.

A short selection on medieval gardens in Europe and a chapter on design elements in a medieval garden conclude the book.

Reviewed by Marge Howard-Jones

GREAT ENGLISH GARDENS

Andrew Lawson and Jane Taylor

North Pomfret, Vt., Distributed by Trafalgar Square, 1998, 160 pages, color throughout, 9″ x 11¾″, softcover, $29.95

This book makes for very interesting reading. It explains the influences of past centuries on the planning and the settings of English gardens. The illustrations are excellent and true to real life as I have visited some of these gardens including Sissinghurst in Kent. This book inspires one to visit more gardens of this caliber. It makes for fascinating reading and I enjoyed the layout of the chapters.

Reviewed by Brenda Robinson

Trafalgar Square is publishing parts of *Flora Brittanica* (reviewed in *California Garden* in Nov-Dec 1998) as individual books: *Flora Britannica Book of Wild Herbs* and *Flora Britannica Book of Spring Flowers*. Each is 144 pages and a softcover edition priced at $17.95. They also have a concise edition of the *Flora Britannica* with 272 pages in hardcover and priced at $29.95.

BEAUTIFUL BELL GARDENS

BY BARBARA S. JONES

BELL GARDENS IN VALLEY CENTER is one of the most delightful and inspiring gardens in the San Diego area. The garden, on 115 acres of rolling terrain, has been open to the public for five and one-half years. It is primarily a vegetable garden, but there are stands of native oak trees and wonderful old gnarled pepper trees and olive trees; attractive picnic areas with grass and flowers and huge boulders; a hillside of brilliant flowers; and a hillside of strawberries. Adobe bricks are made there, too.

Throughout Bell Gardens the latest gardening methods are used and water is distributed efficiently via drip method using their own water pumped from eight wells. Compost is used and green manure. In the top right of picture note the large five acre field. This is the famous pumpkin patch. The green crop is of a beneficial plant that will be plowed under before the field is planted in pumpkins in June. In the foreground of the picture is the demonstration garden. Every row is labeled and gorgeous, healthy vegetables are in different stages of development. Look closely and the double rows of water delivery tubing can be seen on top of each "hill." The wire fencing seen on the upper left is the support for the 1,000 square foot maze. It is fashioned after the medieval English mazes but is planted in sweet peas for the spring and in corn for the fall. The sweet peas had only grown about halfway up when this picture was taken.

Over seventy-five varieties of vegetables are grown in the garden and many are specialty varieties not grown commercially. Bell Gardens is a garden, not an amusement park, but visitors can have a tour of the gardens in a golf cart or on a hay truck. A wonderful quarter-scale train takes visitors on a two and a half mile rail trip through the back area of the gardens. Group tours can be arranged, and educational classes are given to school children. One can bring a lunch and enjoy the many picnic areas scattered throughout the gardens. Visitors are allowed to use the hiking trail along boulder-strewn creeks. Best of all, luscious, at the peak of ripeness, fresh-picked produce can be purchased. It is always interesting but harvest season is a good time to visit because one can go out into the pumpkin patch to pick their own jack-o-lantern and cobs of pop corn and colorful Indian corn are available.

Glen W. Bell, Jr., the founder of Taco Bell, started the gardens as a philanthropic endeavor designed to "show kids how things grow." He retired to Valley Center and became interested in the kids while supporting local 4H and FFA activities. Both he and his wife were raised on farms, so they know how to grow plants properly. And how well it is done at Bell Gardens!

Call ahead for schedules for train and hay wagon rides. The gardens are closed when it rains and on New Year's, Thanksgiving, and Christmas, 760/749-6297. (The area for the most part is accessible for handicapped and most of the paths and roads can be easily and safely traveled.)□

CHIN UP! IT'S TIME TO MEET THE BLACK-CHINNED HUMMINGBIRD©

BY PAT PAWLOWSKI

HMMMM — HOW'S THE BIRD-WATCHING at your house? Humming right along, probably, in more ways than one. Now that it's almost summer, there are apt to be several hummingbird species zooming in and out of your yard, especially if you have a good selection of nectar plants and maybe a hummingbird feeder. Keep reading if you've ever wondered what species of hummers visit your yard.

THE BIRD WITH THE FIVE O'CLOCK SHADOW

In previous articles, I've described the male Anna's hummingbird (the one with the red crown and throat) and the male Costa's (the one with the shocking purple crown and throat). The male black-chinned hummingbird (*Archilochus alexandri*, scientifically speaking), is the only species that has a black chin with a thin band of purple underneath. Of course, in the shade the males' flashy throats do not show up; it is the sun that helps those feathers to flash those gorgeous hues.

The females of all three species are much more sedately garbed and appear quite similar to one another. It is almost impossible for a novice to identify which is which in the field; but for those who would care to try, female black-chins have a green crown and back, with a white chest.

OBTAINING OPTIMUM HUMMINGBIRD ATTENDANCE

For us hummingbird-happy humans who want as many little buzzers around as possible, it's imperative that we provide all the good things of hummingbird life: Water to bathe in, food to eat, places to perch in, and areas to nest in. But before we go into all that, you might like to peruse a wonderful book called *The Hummingbird Garden* by Mathew Tekulsky. In this book, Tekulsky spices information about hummingbird gardening with amusing anecdotes of hummer high jinks as related by avian experts.

One such expert was Frank Bene, who wrote about the arrival of a female black-chin who had frequented his yard the previous year: ". . . no sooner had I opened the kitchen door than she flew over to me . . . as though to greet me . . . I picked up the feeder at the side of the house and walked up to her, but before I got to the clothesline she was in front of me, drinking from the

Showing chin pollination by black-chinned hummingbird

feeder in my hand."

It sounds as if he achieved years of hummingbird success.

So can we.

PROVIDING THE ESSENTIALS

Supplying water is easy, and plants can do the rest by providing food, nesting supplies, perching areas and nesting places. Of course, we as gardeners already knew that plants are the answer to almost any problem anyway.

WATER

Hummers can be quite creative when they feel the need for a bath. They will brush themselves against tiny pools of moisture held in a cupped leaf; they will fly through the spray from a hose (extra fun if you happen to be holding the hose at the time); and they can make good use of a birdbath—all you need do is make sure it is filled with water. The sound of running water attracts hummers, as it does almost all birds, so you might like to invest in a fountain, especially one that has a ledge or shelf with water flowing over it.

PLANTS, PLANTS AND MORE PLANTS

Here is the really juicy part: It looks as though you gardeners have to force yourselves to visit a nursery

again. Gosh darn! And here you thought you might never again have to endure nursery-hopping and having to ogle all those bodacious *Buddleias* and irrepressible irises.

Well, chin up. Get ready to hit those nurseries. Following are some plants that will make your yard practically irresistible to black-chins.

Arroyo willow (*Salix lasiolepis*) - This is a handsome native willow, which reaches about 25 feet. Unlike the gigantic, blobby-looking and morose weeping willow, the more cheerful arroyo willow does not weep; its branches happily lift themselves skyward, with a subtle relaxed grace. However, the arroyo willow is still a willow and that of course means that it is an enthusiastic water-guzzler, and has invasive roots to boot. Make sure to plant it well away from things like water pipes and leach lines, or keep it in an extra-large container.

Here is how willow helps hummers: The flowers provide nectar for the birds to guzzle. In addition, the nectar attracts small insects, which make up about 30% of an adult hummer's diet. The entire tree provides shelter and perching places. And the silk plant down from willows is used by the female hummer when building her nest.

Besides harboring hummers, the willow will attract butterflies like the mourning cloak and the western tiger swallowtail, two especially eye-pleasing species.

Butterfly bush (*Buddleia spp.*) - These are fountain-shaped bushes whose flowers have a delightful fragrance. Most species are evergreen in our Mediterranean-type climate but need to be trimmed back in winter to look their spiffiest. They like regular water and sun or light shade.

Hummingbirds love the nectar tucked inside the flowers, and butterflies are also enamored of the sweet stuff; in fact, once a mourning cloak was so busy tippling at a butterfly bush that I was able to gently touch its wings.

Citrus (*Citrus spp.*) - Is there anything more delicious than the scent of citrus on a moonlit night? Is there anything more delicious than the savory flavor of a well-ripened orange any time at all? (Not counting chocolate-chip cookie-dough ice cream).

Black-chins enjoy the flower nectar and are known to nest, perch, and take shelter in the branches of citrus trees. Giant swallowtail butterflies use citrus as a host and also love the flowers. Citrus trees of all kinds are handsome landscaping subjects. So here we have another multiplex-use, indispensable group of plants.

Rufus hummingbird on orange blossoms

Hall's honeysuckle (*Lonicera japonica* 'Halliana') -You want pushy? Hall's honeysuckle is pushy. But pushiness has its advantages, too; if you have sloping ground that needs covering in a hurry, Hall's honey can do the job. It is easy to grow and is fairly drought tolerant once established.

Besides having one of the best smells on earth, the flowers of Hall's honeysuckle just brim with nectar, which may draw more black-chins than you know what to do with. Butterflies such as the giant swallowtail also enjoy honeysuckle nectar, just as some youthful gardeners themselves do. And the tiny fruits are eaten by many birds.

Iris (*Iris spp.*) - Iris was the goddess of the rainbow, so they say. Jupiter, CEO of the gods and possessor of the world's largest roving eye, fancied Iris but the goddess resisted his sweet-talk. This endeared Iris to Jupiter's wife Juno, who then commemorated Iris' virtue with a flower that would bear the name of Iris and bloom in the rainbow hues of her robes.

Irises do come in lots of colors. There are many different kinds, and most flower in spring or summer. Leaves are swordlike or grasslike, lending a pleasant

vertical aspect to the garden. The flowers look wonderful in a vase and apparently contain nectar since black-chins visit them frequently.

California sycamore (*Plantanus racemosa*) - This is a big, big tree, but if you have room for it, you'll be doing lots of individuals a big favor. The tree is used as a nesting site for many bird species. Small insects attracted in spring are food for many birds. The tiny fruits provide home-grown bird seed. The western tiger swallowtail is attracted to the tree. Last but not least, black-chin moms-to-be use the fuzzy underside of the leaves in nest-building, and the females naturally tend to frequent areas with trees near stream beds or other sources of water.

The California sycamore is a true native Californian, laid-back and picturesque. It endures heat and wind and is very speedy, growth-wise. So dig a hole, plop it in, and step back fast.

Milkweed (*Asclepias spp.*) - This perennial has been mentioned before, in relation to monarch butterflies. Here it is again, listed this time because its seeds have little canopies of floss that are used by female black-chins to make nests for their young.

So, to all those persons who do not have room for a sycamore tree in their yards: Plant milkweed. It will attract monarch butterflies. It will make your garden look good—many species are naturally compact and, if you want to, you can cut them back to make them even bushier. Flower colors vary according to species; there is a color for almost everyone. And the pregger black-chins can surely use the floss for their nest-building.

One other plus: The milky juice from milkweed is said to cure warts.

Japanese anemone (*Anemone japonica*) - This is a beautiful long-lived perennial with white, pink, or rose flowers. The Greeks had a name for it: *anemos*, for wind. The anemone was said to open only at the wind's bidding. Black-chins are animated little flying animals. The female black-chin may be the most animated of all at times, busily gathering the plant down from the anemone to feather her nest. Louise Blakey, a hummingbird expert, said that she has on many occasions observed a hummingbird mother-in-waiting delicately remove down from Japanese anemones that had gone to seed. The little bird then adds the down to the nest with other bits and pieces such as spider silk.

SAVE THOSE SPIDERS!

Admittedly, they're not the cutest creatures, except to other spiders. However, spiders do help to keep the environment in balance.

In addition, silk from spider webs is used by black-chins when building their nests. Indeed, the very strong, stretchy silk is the substance that holds the entire nest together. After the eggs hatch, the silk lets the nest expand a bit to fit the growing youngsters.

This is a good time to inject a note of caution about using pesticides and herbicides. Think twice about zapping that innocent little garden spider who actually eats many of the bugs you don't want around. If you spray poisonous potions around flowers, the nectar inside the blooms might become contaminated and destroy the very nectar-noshing creatures you want to attract.

A NOTE ABOUT FEEDERS

Since we're on the subject of being careful: Remember to keep artificial hummingbird feeders clean. Wash them frequently and thoroughly—every other day in hot weather. The see-through kinds are best; that way you can notice if there is any mold forming on the inside.

For a feeding solution, boil one part regular sugar and four parts water, then cool. No substitutions please. You don't need to put in red food coloring either; feeders usually have some red on them anyway.

Although feeders do help to keep hummers happy, it's best to have as many nectar-bearing plants around as possible. Pick kinds that will flower at different times of the year to provide a steady nectar source. In the long run, it's easier to use plants instead of a feeder since you don't have to worry about cleaning the feeder and preparing the sugar-water solution.

WHO YA GONNA CALL?

Sometimes accidents happen and young hummers fall out of their nests, or adults may fly into a window and fall to the ground, or perhaps Kitty has brought you a feathered present. There are several organizations you can call for help: Project Wildlife at 619/225-9202, and the Hummingbird Rescue Team at 619/420-5156.

HUMOR THOSE HUMMERS

Put in flowers for nectar; shrubs for perching; trees for a humble abode—and watch the hummers hum in. □

Text copyright by Pat Pawlowski, who is a writer/lecturer and the wildlife garden designer for Animated Gardens.

Illustrations by Marilyn Hoff Stewart.

MISSION GORGE PARK AND VISITOR CENTER SHOWING OFF NATIVES

BY BETTY NEWTON

THIS IS AN EXCELLENT time of year to get acquainted with native plants. Right now you can enjoy green natives on the hillsides, in canyons, and at several reserves around the county.

The natives are not only green, but young, they were planted in 1994, immediately around the four-year-old Mission Trails Regional Park Visitor and Interpretive Center, north of Mission Gorge Road and east of Jackson Drive, at 1 Fr. Junipero Serra Way. The striking architecture of the building enhances this natural park.

Carefully designed in every way, the Center looks out to the distinctive profile of historic Mission Gorge where Padre Dam was built to hold water for mission crops in the 1700s. The red and buff rock of the museum's south walls picks up the color of the outcroppings of rock near the top of the ridge to the northeast.

A group from Southern California landscape architectural company K.T.U. & A. worked under Michael Theilacker to imagine the unique hardscaping lines of the entrance road, paths, and amphitheater. The line of the road up to the Center beautifully suggests a river just as the side paths suggest flowing water. Close to two acres is in hardscaping and plants here. The building sits in an over 1000-acre natural garden. It acts as a foil, helping to show off the surrounding native habitats of coastal scrub, chaparral, oak woodland, and river bottom (riparian).

Linda Graul, landscape architect with the project, said, "The low wall [facing the parking area] symbolizes the dam itself. Then you snake down the path to give the feeling of going down the gorge. Here we have real water-loving plants with a compacted clay subsoil and frequent irrigation." In the manmade cobble-rock stream bed grow junko, cattails, and nearby willows.

When I first saw the plant list in late 1994, I thought it had been taken directly from the environmental impact report. Surprisingly the natives in cans were sometimes planted two and a half feet apart. They have grown as intended and filled in to look exactly like the hillsides. Graul had stated that after planting, "We are going to let nature take its course. Gradually the plants will be weaned off automatic irrigation. The larger plants will eventually shade out the smaller ones and we will have a real **natural succession.**"

Randy Hawley, head ranger at that time said, "We may do some cutting back."

The trees around the building were planted out from 15 gallon containers. They include sycamore, two kinds of willow, cottonwood, and coast live oaks. We can see their ancestors in the riverbed below.

It's not always easy getting container-grown natives to live. Basically, natives require fast drainage and fall planting.

Surprisingly one of the most sensitive to excess water, the yellow-tulip flowered flannel bush, *Fremontia*, or *Fremontodendron* has made it through the first four years. Though suffering some branch dieback, it is in good bloom this spring.

Some of those four-year-old plants were blooming this Easter. Continuing to flower for several months will

Mission Trails Regional Park Visitors and Interpretive Center

be bush monkey flower, creamy bladderpod, San Diego sunflower, and *Encelia* daisy bushes as well as gray, strongly fragrant California sagebrush, and the other *Artemesia*, mugwort. (The first of course is *A. californica* and the second *A. douglasiana*). The fuchsia-flowered gooseberry has been in bloom every time I visit. I can imagine that in wildish home gardens.

If recognizing San Diego sunflower in the field is a new experience to you, as it has been for me, that compact bush has perhaps two-inch, very dark-green leaves with several points on each and the flowers are perhaps half as wide as three-inch *Encelias*. The *Encelias* have very long stems, holding their flowers eight to thirteen inches above the bush.

You may need a guide, a docent or ranger, or at least a book to tell these plants apart. Over a dozen plants along the eastern path at the Center are identified with plaques, however. Some of those plants have died. Once your eyes adjust to looking carefully, you may note two *Baccharis*, chaparral broom, and mule fat, as well as little yellow-flowered, deerweed, deep magenta on the tiny-flowered wild four o'clocks (really quite showy) and foxtail fescue.

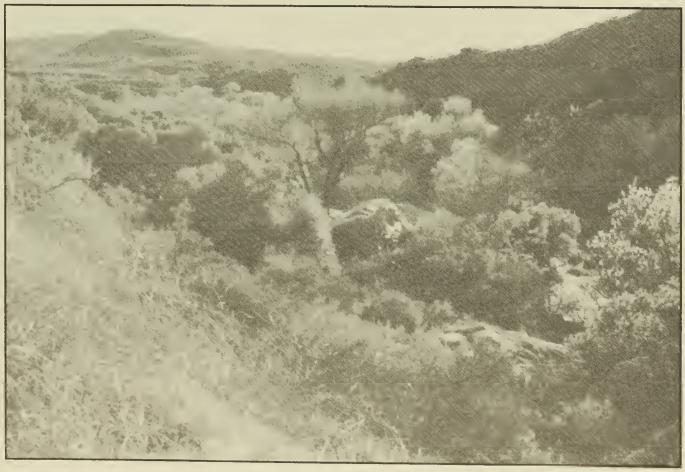
California wild roses should be blooming with their clusters of inch-and-a-half flowers soon and on through summer. They are in the parking lot and one on the north side of the building bloomed for a long time two years ago. Of course those flowers are followed by handsome small red-orange hips.

The rangers at Mission Trails Regional Park take on special teaching responsibilities. Ranger Dan Bylin leads bird walks and is honing his plant identification skills. We looked together at a wonderful selection of plants not around the building. Along old Mission Gorge Road, now Fr. Junipero Serra Way, we saw four kinds of native ferns, shooting stars, blue dicks, and resurrection plant, a *Selaginella* moss, among a very rich flora. The San Diego River flows through this cut. It can always be heard and often seen.

Cars may only drive east here behind Cowles Mountain and they emerge from the Park somewhat beyond Padre Dam. Walkers and cyclists use the other half of the old road. The Interpretive Center teaches about early Indians and their culture here as well about plant and animal life and habitat groupings. The Park itself is glorious if you like to feel away from civilization. Peaceful, it absorbs its many visitors and leaves a quiet world.□

Betty Newton teaches gardening classes at Grossmont Adult Schools and writes for the ***San Diego Union-Tribune****. Photographs by the author.*

below
The San Diego River in Mission Trails Regional Park holds several native habitats: riparian to scrub sage.



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619/232-5762, located in Casa del Prado, Room 105, Balboa Park

Under the sponsorship of the Park & Recreation Department, City of San Diego, California

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1999

June 15, 1999
5:45 p.m.
Casa del Prado, Room 101
Balboa Park, San Diego

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Co-Pres: Nancy Wilshire 760-723-1958

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La Mesa

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College, Student Center Bldg (upstairs)

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Pres: Colleen Michell 485-8170

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Pres: Shirley Arms 756-5125

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Pres: Judith Chapman 566-2947
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4th Thu - 10:00 am, Torrey Pines Christian
Church, LJ

THE VISTA GARDEN CLUB
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IKEBANA INTERNATIONAL CHAPTER 119
Pres: Jane Rodarte 447-7578
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LA JOLLA CHAPTER
2nd Tues - 10:00 am 672-7850
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SAN DIEGO BRANCH
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AMERICAN BEGONIA SOCIETY
Pres: Michael Ludwig 262-7535
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Quail Gardens
SAN MIGUEL BRANCH
AMERICAN BEGONIA SOCIETY
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PALOMAR CACTUS AND SUCCULENT
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SAN DIEGO COUNTY DAHLIA SOCIETY
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Contact: John Bruce
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Quail Gardens

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North County 760-758-4290

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E-mail: srocha@pacbell.net
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Jan/Feb - 4th Mon

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AFFILIATES:

Send changes to: Lynn Beyerle, Affiliates Editor, *California Garden*, 2125 Park Boulevard, San Diego CA 92101-4753. Call 232-5762.

Deadline for Jul-Aug issue: May 15, 1999

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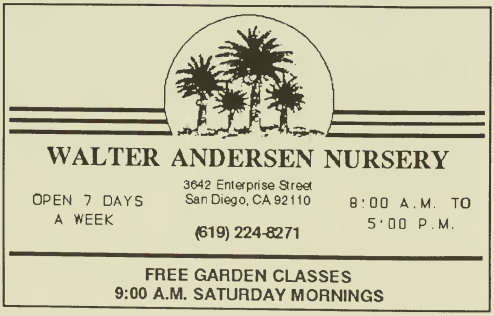

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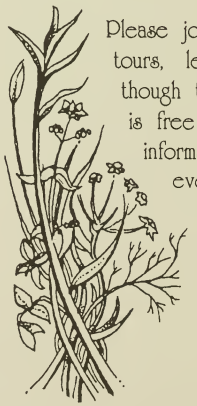

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PERIODICALS POSTAGE

KATE SESSIONS BOOK

The complete collection of writings by Kate Sessions in *California Garden* magazine from 1909 until 1939 is now available at the San Diego Floral Association office in Room 105, Casa del Prado, Balboa Park. The book contains a plant index and many changes in plant names, particularly scientific, have been noted. Often known as the "Mother of Balboa Park" she was also known as the "Aunt of San Diego." For over 50 years she devoted her life to helping people grow beautiful plants in San Diego. She tells how, in this book that is for sale in the San Diego Floral Office for $18.00 (tax included) — $15.00 (tax included) for members. If you wish a copy mailed to you, use the coupon below and enclose $3.00 for handling and mailing.

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